January 23,1979

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Alexander Mackay-Smith
The Chronicle of the Horse

Dear Mr. Mackay-Smith,

About five or six years ago, I sent you an article for the Chronicle concerning some new ideas I had about how a horse jumps. You expressed interest and encouraged me, but felt the idea would be best pursued in some longer form. I have pursued those original ideas, including many hours of research in the library and field during my training, and recently with preliminary force measurments with Dr. George Pratt of M.I.T. I believe the manuscript expresses some original ideas about jumping.

By now you can see that I have finished the longer work, the enclosed book, Karl Leck has taken 25-30 series of motor-drive sequences of many well known and unknown jumping and three day riders, I have prepared captions in what I feel is an educational approach.

The main reason I am writing is for advice. You told me those years ago that you would be happy to review the book when I finished it, of course I'm sure you meant published. I have sent the manuscript and the photos to an agent recommended by some horse writers in New York (Glen Cowley). I am now a little leary as I have not heard from him in several months one way or the other. I would be honored if you would read the manuscript and tell me what you think. I am sorry I could not get the pictures to you but they are in New York. I realize I am taking quite a liberty.

As I said initially I would appreciate any advice on the matter. Thank You very much for your time and consideration.

Sincerely,

Paul Belasik

Paul Belasik

Some Theory on Jumping

Paul Belasik

Preface

Since the following manuscript is devoted mostly to jumping, we will start right in with jumping. However, a horse cannot be started right in with jumping. They must be prepared. At least the horse should move in good straight gaits with equal facility on both leads, and be capable of some extension, collection ,and lateral work. It is important that , from,and especially at the beginning the horse move on it's muscles and not on tendons and ligaments, for this will lead to sore and lame horses. Often the young horse could benifit from more practice but the greatest care must be taken until the horse's musculature is sufficiently developed to stand up to the work. Therefore at a minimum, we have a horse that is capable of approaching fences accurately and possesses the musculature necessary for the exertion jumping involves. I cannot stress too strongly the preparation for beginning jumping, a good basis on the flat, which will always be concurrent and complimentary to our work over fences. One can easily notice that trained horses are more often reflections of the type of work they have been doing than of their particular breeding. Even though certain breeds lend themselves to different types of work, there will always be considerable variation among individuals due to the type of work they have been doing. For example in Thoroughbreds the difference between the hunter type,the three day type, the dressage type, and the racing animal, is not any basic

skeletal difference , but rather a muscular difference. It is the muscular structure that is quite variable , and how changeable is a matter of mentality some individuals with good temperment etc. showing great range of activities. In general it is the slower more repetitive work that builds heavier or denser muscle, and the faster work which builds a lighter leaner muscled animal.

The jumper must be a combination of the two types, in order to be jumped safely. The horse must build some denser muscle first through dressage, then move onto the faster work of jumping.

Training the jumping horse often follows a program that is justly connected with the outdoors and the elements. Many of the various jumps we need are out cross country and even in the stadium or jumping arena, a large area with changing fences. Therefore, our program will have to take advantage of good weather and good footing. Footing is important especially for the young and learning horse. Missteps or accidents on account of slipping and sliding do nothing for the horse or rider's confidence or health. The trainer should always consider the mood of the horse and rider and base the length of the ride on this.

In spite of a rather dogmatic approach at times, the reader must realize that in the end set rules are deleterious and can limit the creativity and individual style of a rider. The rider must develope their own feel and style. They must

first use discipline to obtain a base of knowledge but then they must free themselves. They must recognise that form, a certain stylized form is not the only goal in riding. That it may be limiting and even harmful to the beginning rider. Growth and knowledge must be the goals. For in the end the lessons of riding must pull the rider out of himself in order for him to act correctly in spite of any limiting feelings.

CHAPTER ONE

Preparations For Jumping

The training of the jumping horse may begin as early as the leading lessons of the weanling. It is a critical and most challenging time for it is really the horse's first introduction to man. Little by little we begin to reach the horse and the horse begins to understand man. It is really this early that the preparations of the jumper begin. It is the quality of the language then, that will remain with the horse and nurture or destroy spirit or friendship.

Several years later, at the introductory stage of training the jumper certain equiptment can be beneficial. Supportive banadages, wrapped around the front cannons may be helpful for the horse, in case of knocks against the cavelletti or as a precaution in case of mis-steps and unusual strain on a given leg. Later on boots may be helpful in galloping over cross country, or during and extensive schooling, either for additional support or for protection against scrapes, etc. They should not be relied on too consistently however, as the muscle must be developed to support the bone, tendons, and ligaments of the moving horse, unnassisted. There is

another piece of equiptment that is often employed in jumping , and it is the running or standing martingale. The martingale is a strap of leather that extends simply from the girth to the horse's bridle. There are two basic types, the running and the standing. The running martingale is one where the upper connection seperates into two straps which each have a ring on the end. The reins from the bridle pass through these rings back to the hands of the rider. When properly adjusted the running martingale does not interfere with the horse's normal movement. It only comes into play when the horse throws his head way up and goes well off the bit. Then when the rider pulls on the reins, through the rings the bit gets pulled in downward direction , as in a pulley, to get the horse back under control. As a safety precaution this tool has merit, if properly adjusted. If this martingale is adjusted too short then there is constant pressure on the bit in a downward direction, encourageing the horse to eventually go behind the bit. The rings when pulled up vertical should be about the height of the withers or hip, as rough guidelines. The other type of martingale is the standing martingale. It is a simple strap that extends from the horse's girth to the noseband of the bridle. This martingale differs from the running in that it's length is solidly fixed. In

the running martingale more rein can be let out to lessen it's effect, but in the standing, there is no quick adjustment. It is critical that the standing martingale be properly adjusted so that the horse may stretch and reach. When one uses the standing martingale, one must be well aware of the finality of it's adjustment.

Martingales are preventative measures, and it would be better if they were not needed at all, but unfortunately we are not in an ideal world. So if you employ them, take the time to adjust them properly. They must not interfere with the normal stretch and raising of the head and neck during the jump. They should only come into play in more extreme situations and movements by the horse.

Before we begin our jumping work we usually raise our stirrups up a notch or two in order to facilitate a little more bend in the knee and more suspensory support, affording the rider some grip through the knee and thigh. The basic position should not be greatly altered, although the rider is still seated, they are more "on the saddle than in the saddle".

The cavelletti begins our mounted work at the jump. It is a very useful tool and the true beginning of jumping, in a low and carefully spaced series of elements. They are an excellent exercise because while encourageing the len-

gthening and the lightening of the step, it also necessitates timing. It is a jump in a sense that demands control. When properly used it is an exercise that also developes and encourages impulsion, and those two qualities impulsion and timing are near the heart of jumping. The cavelletti has numerous effects which are beneficial to the jumper. For one, it teaches the horse to carefully place his feet, it begins the horse on the path of raising his knees for the jump, and lifting both the front and hind legs closer to the body. Second it places more demand on the swinging muscles of the back. These muscles gradually developé without losing their flexibility, thus allowing the horse to maintain a long free stride. Third the cavelletti demands more from the hindlegs in terms of thrust since the element of height is added to the normal trotting stride. Fourth, it encourages the developement of balance, as seen in the extended head and neck which act as levers on the hindquarters through the back. Finally it accustoms the horse to the psychological pressure of a trappy situation . Instead of a panicy burst out of a tense situation, the horse learns to pick his way out carefully, learning calmness and confidence. These of course are not the only advantages of the tool.

Because of it's rythmic nature, the cavelletti encourages rythmic breathing in the horse. Inhalations and exhalations become timed with muscular exertions,to the point of dev-

eloping lungs and breath in the jumper. Relaxed breathing will be critical in more advanced work.

A series of low poles, the cavelletti, should have a sufficiently wide face preferably about eight feet across. It may be used with wings, which will help funnel the young horse into and through them. The individual poles need not be very high. If they are 6-12 inches for the walk and trot, and about 18 inches for the canter they will be fine. They should be high enough to make the horse pick up his feet higher than normal, without being so high as to throw the horse off balance in an attempt to leap over each one. The cavelletti is perhaps most used at the trot, although all gaits will benefit from proper work over the poles. The widths between each pole should be changeable. At the walk, the average distance between each pole should be between $2\frac{1}{2}$ and $3\frac{1}{2}$ feet. At the trot, the average distance between the poles should be between 4 and 5 feet. At the canter, the average distance between the poles should be between 10 and 12 feet. The trainer must keep in mind here that the goal is timing, muscle developement, and lengthening. If the poles are too close together they will not make the horse reach and push. If the poles are too far apart, the horse may break stride or even gait, lengthening will of course stop and timing will fall apart. It is best to start at the walk then proceed to the trot and finally the canter. There must be a noticeable change in the horse's stride when they enter and pass through the cavelletti. The trainer when wa-

tching cavelletti work for adjustments, must avoid fascination with the front legs and pay attention to the total amount of flexion and reach. There is often another preoccupation and it is with "hock engagement", this isolation of action to any one joint is ridiculous, for it is the whole horse, hip, stifle, back, head, etc. that must be observed. The key is good overall freedom of the legs, with the horse moving largely along with some grace and timing.

Finally the number of poles in the series may vary as well as the placing of whole series. Four poles is usually the amount in any one series, since more tend, or better can, excite the young horse, and negate the gymnastic effect. The cavelletti must be cleverly used in order not to bore the horse while they are developing the muscle and psychological qualities needed later in jumping. It must be remembered that mastery of technique is not the value of the cavelletti, just as the value of a push-up for a human is not in aquiring some stylistic form in which they are done. The value lies in the strength we develope with the use of the exercise, and so it is with the cavelletti. We donot quit using it after one week because we can negotiate it flawlessly. It takes time for the horse to further develope the stomach, neck, back, and leg muscles and the calmness of attitude that will be called upon in later jumping. So we use the cavelletti a

couple of times a week or so for 15 or 20 minutes concurrent with our work on the flat to prepare the horse to jump.

We begin by bringing the horse straight towards the cavelletti at a walk with the poles spaced at perhaps 2½ feet, which we may later lengthen. We keep close contact with the reins, with a low hand, our hands must be light and free to give the horse all the rein it needs to balance, yet enough contact to keep the horse steady and straight. The hands may be kept wider than normal to avoid using the reins in any way for balance, and to keep them totally independent. The rider's legs encourage the horse smartly foward and straight, into and through. If the horse does this , we are off. If not try again using the voice to calm the horse and perhaps trying a shorter approach off a circle nearer to the first pole of the series. As long as the horse stays relaxed we will succeed. We can try again a few more times until the horse is calmly walking through them with decent impulsion. If so, we can then introduce the trot, moving the poles so that the space between each is about 4 feet, which we may systematiclly increase to 5 feet, depending on the particular horse. At the trot the only difference is, that we may use a lighter seat, or a posting trot so that there is no added burden at any given awkward moment. We will spend more time later analyizing the rider's position especially over all jumps, however, many riders approach and pass through the cavelletti standing off the stirrups, bracing their hands on the horse's neck with their seat high and foward.

Without over anaylizing position at this time, suffice to say that such a position in this exercise invites crookedness in the green horse's approach, and places added strain on the shoulders of an already unbalanced young horse. The rider has little use of his or her legs to adjust the horse because they are rigidly holding themselves up. Furthermore this position limits a free elastic hand which allows the horse to reach out and down with it's head and neck, while teaching the rider the intial work of the following hand. The rider should stay light on the horse's back but they must stay in balance not overly foward or behind.

We continue our work at the trot through the cavelletti developing bold impulsion but quiet control. We can vary the set up and perhaps the color of the poles from natural to black to white and so on, until we get a deliberately springy pass through them with a systematic quiet approach . When this is accomplished there is elegance and no choppiness in it. The whole dance exudes a literal fluidity, muscles, tendons, ligaments, support the bone so well that all movements are absorbed in a springy pass. This can be some of the first real power the rider will be aware of. The horse seems to sustain himself above ground. This power is very close to the sustained power in flight over jumps.

The next step after a couple of weeks is to introduce the canter over the cavelletti, using a distance between the poles

of between 10 and 12 feet. It also is a good idea to raise the poles up slightly higher from the 6-12 inches at the trot to about 18 inches for the canter, as this will make the horse rounder in the stride. Again we try for a deliberate springy pass, unhurried and round. After a couple more weeks we may introduce a small jump, perhaps 2 feet or so, at the end of a pass through the poles. At the trot the jump should be around 12 feet from the last pole of the cavelletti to allow for a comfortable stride.At the canter the jump should be around 15 feet , and in more advanced work may be lengthened or shortened by a foot, to encourage lengthening and collection between fences. When we set up this first jump we should make sure the horse does not rush the fence. We try to keep the same rhythm and stay in gait especially on landing. If on landing the gait is too hurried we should use the half halt to regain the horse's compsure. If the horse still refuses to slow on landing , we can place an additional cavelletti rail after the jump, and this rail should be at least 21 feet from the fence in order to permit the horse a canter stride after landing from the fence. This added obstacle should help to teach the horse about a orderly landing. It is a bad habit to turn too quickly on landing, a slight arc is one thing, but sharp constant turns upon finishing a jump are harmful. It will be much easier for control later on if we develope calm stops and transitions now. The cavelletti may

be used throughout schooling, it is as good a preparation as any I have ever seen for training the young horse or rider, and for correcting problems in older horses.

There are atleast two other preparations for training the jumping horse. One is the chute. The chute is an enclosed alley or runway which has jumps in it. The horse is made to run through the chute free. The chute is used two ways, with and without a rider. Without the rider it is hard to help regulate the young horse in his approach, and landings. It can encourage rushing fences, especially if the driver is not careful, for he can instill fear in tye horse from behind, and discourage confidence in jumping altogether. It's value without the rider is still dubious because jumping mounted and unmounted is all the difference in the world. No matter how much work we do free, it is always an entirely new picture when the horse, has the rider and his or her totality to consider. It can be a good tool especially with horses or warm or cold blood, for with these calmer horses it may be a good exercising and preparing tool, increasing muscle developement and flexibility without the added weight of the rider. However with the more excitable hotter blooded horses it's rewards are usually not worth the risk, since the cavelletti is a much better tool.

The chute mounted is probably a much better tool for the rider than for the horse. It can allow the rider to concentrate on the isolated task of jumping without worrying as much about control. Here the rider can jump without reins or stirrups to get confidence, in a balanced position. However it takes a well trained horse, and in general is a risky endeavor.

Another preparation is lungeing the horse over poles or specially constructed fences. One must always be wary of the lunge line and the inside jump standard, no matter how it is constructed. This technique, as far as I have ever seen, is an unmounted exercise, it is a different matter when the horse must contend with the rider and all his or her emotions. Lungeing a horse over fences or poles is a difficult technique because it involves the changing of the center of the lungeing circle, to either include or pass by the jump, by backing away from it. It also invites runouts to the inside because of the obvious difference in jump construction. There cannot be any wing or standard above the height of the pole, on the inside. Therefore it tempts the horse to runout to the opening middle. Even if the person lungeing is aware, it is difficult. The horse must meet the obstacle exactly in the middle or even over to the outside to avoid temptation. When done perfectly, this tool or preparatory exercise has gymnastic value, again because it can build muscle without the weight of the

rider. However because of the technical difficulties I could not whole heartedly recommend the use of it for most people. For good preparation we need a steady simple preparation, preferably with a rider. There are simply too many other factors to be concerned with. Our preparatory work must aim at introducing the not finished horse to approaching and passing over obstacles with some height. Therefore in the end, however the horse is prepared, either by lungeing over poles, by the chute, or by direct work over the cavelletti, we must develope some system where the body is developed along with the mind. We try for a horse that in a gradual testing process will approach, jump, and land safely. That is really all there is too it, but of course that is alot.

CHAPTER TWO

THE HORSE AT THE JUMP

A careful jump, exactly planned and emotionally carried out can place the rider in a moment of suspension where they can have no past or future but a timeless innocence of perception. A moment where one's mind and body are totally comitted to the jumping horse.

As the horse approaches the fence from several strides out, there is a careful striding, ever reaching to gain more and more impulsion, and it seems to gather more and more ground. The horse flexes and extends to get it's hind legs well under itself. The horse may also raise it's head higher than normal in an effort to see better, and to lighten the forehand. There may also be a braking action in the front legs to slow the momentum down and to set the weight over the haunches and hind legs. When the horse reaches the take off area of it's choice whatever gait entered at is interrupted. That is, when saying the gait is a series of rhythmic footfalls, or cadence, than the gait is interrupted,

at the take off. The front legs brace, forming a fork or post for a split second. The hind legs will swing up and then under the horse's body. A beautiful balanced exchange of weight is taking place from off the forehand unto the haunches, and the hind legs the horse's real source of power. Although the same sort of weight transfer takes place in every stride of the canter or gallop, this one in the jump is unique. In the canter or gallop, there is always a second and or third beat to the stride where the diagnol pair of legs transfer the weight foward, in the trot again diagnols smooth the way foward. In the jump however there is a break, as the horse dramaticlly breaks gait to settle the weight over it's legs. It is the amount of impulsion and momentum with which the horse enters the take off area that dictates for the most part how much power will be available to tap for the jump. We have all seen over excited show jumpers, hopping in place almost entirely on their hind legs if they are held before the jump. The rider moves them on, and the energy is transfered to a ground eating gallop and a thrusting drive toward and over the fence. So impulsion is injected into the gait of the horse right up to moment of the set up.

Now the horse begins the forehand rise, in conjunction with a bound off the front legs, the stomach muscles in time with an expiration pull between their attachment at the

ribs and hind quarters helping to draw the forehand back, atbthis time one can notice a swelling of the muscles of the abdomen, concurrently the muscles of the hindquarters pull downward and backward, as the muscles of the back, stifle, and arm also contract. The horse flexes at the hocks, and their is tension in the throat and chest. Compare these muscles systems to the same sets of muscles in the later phase of the jump where they are flaccid or relaxed. It is a combined action of the muscles of the rump, back, and neck along with the abdomen that help set the forehand up for the proper trajectory. The hind legs may or may not be planted at the beginning of the forehand rise, because the forehand rise initiates in the shift of weight, and the muscular movements connected with it. The very similar movements as in the phase of suspension during the canter. In the normal canter or gallop stride the forehand aims in a sense the driving power from the rear. It's own propelling force is somewhat negated by it's braking force when it first strikes down. By the time the leading foreleg is on the ground carrying weight, the rear legs are already coming foward, the weight is continuously being balanced. It is important to remember here how much the rhythmic momentum adds to the swinging under and the change of weight off the forelegs. A suitable analogy might be a person doing a gymn-

astic hand spring, the gymnast gains momentum in a rapid approach then vaults onto his hands and over back to his feet the momentum of the foward movement is one of the keys, if the gymnast were just dropped straight down from four feet or so onto his wrists he could not possibly bounce himself over, the strain would break his wrists, the momentum the foward movement of the approach is necessary. So with the horse's stride, the momentum aleviates strain on a particular limb or joint. It is only by the dynamic contribution of various flows of energies, that such movement is possible, without great strain. You cannot dissect the rhythmic build up of power out of context with continuous motion, the extremely fluid nature of movement must be kept in mind, to understand the jump.

At this point of the jump, there is a theory that a lowering of the croup and even a second lowering of the croup is very important. Well there is a lowering of the croup, which can be seen in the continuous contracting angle of the stifle until take off. The horse crouches, squeezes or sets itself further down when it is poised over it's hind legs, at least some horses do especially at higher jumps. However this lowering is simply continuous contraction from the same processes we have already described, namely the action of the stomach, back, and hindquarters. There is a complex set of muscle reactions, in which often the same sets of muscles are working in systems of checks and balances on each other. Therefore this croup lowering is simply good

flexibility in free strong muscles and joints, in an effort to get the horse more spring. If croup lowering were really the crucial source of power for the jump, a horse would be able to jump just as high from a standstill as from a gallop or trot. However this is not so. Again we must remember the rhythmic momentum, it is not a brute effort at the last stride, but a build up of and by the standard muscle arrangements. It is the momentum and impulsion which dictate how much power will be available to jump with. This is of course why most jumping is done from a strong canter or gallop.

It is during this time of crouching or setting up that the horse further preapares the trajectory it will follow. We have seen from experiments that when the horse is jumping, the distance from the take off to the first element of the fence is far more consistant than the distance from that element to landing, for that matter even from the last element to landing. It also appears that after a minimum height fence is reached the force on the front legs will remain fairly constant, namely enough to bound the forehand up with the help of the muscles to the proper set up. The main adjustments to the heights and spreads is done by the hind legs. The horse also learns to adjust and look for patterns of flight over given jumps in hours of practice sessions, over many types of obstacles. The horse may also adjust in the approaches, longer wider jumps are approached

in a more extended frame. The horse approaches on a longer flatter stride, carrying over into a longer flatter leap. The horse approaches on a more collected frame for a trajectory that may be higher or steeper. Both approaches assume impulsion, becuase in general the greater the flexion and extension of the gait in the approach, the greater the engagement, the greater the potential for the jump. Finally the horse adjusts in the air with different amounts of folding of the limbs, and with different flexion of the spine, not just the back, but the spine, that allows for the free follow through of the hind legs and extension of the neck, through to the rump.

Once the horse realizes the proper trajectory, the next phase is the take off. It should be understood at this time that the nature of muscles is to move the horse by closing and opening joints. Muscles in general cannot push to flex a joint. The brain instructs the muscles on one side of the joint to contract, thus closing the angle of the joint. Then the brain may instruct a set of muscles on the other side of the joint to contract, and as they do the previously closed angle of the joint is opened, often with the other set still imposing some restraints so that the opening or closeing movement is not overdone. Therefore the joint is forcefully opened and closed by opposing sets of muscles which maintain checks and balances on each other. In this next phase we see the most free extension of both hind legs sometimes

simultaneously, always very close, and this is unique to the jump. It is of course very important. Great leaps are prepared in the power gaining strides immeadiately preceding the jump.

At the extension or take off we have the front legs folding or folded up and the horse realizing a bascule, a balanced position in the air. The great thrust from the hind legs flexes the back upward slightly in a wave like thrust being absorbed through the spine. There is a stretching of the neck and a reaching of the head as the horse bends through the spine, or along the spine. It is important not to think of bending only occurring or not occurring in the back, this again is the same isolation of movement we talked about earlier, there are definite changes in the horses spine during the jump with more or less bending at various places along it. If the rider interrupts the bending action anywhere along the spine, whether it is at the neck with too heavy hands, or at the back with too heavy a seat, the result is alwyas the same, the gait breaks down the legs become less manuverable. The horse unequivically bends around jumps, this is especially visible over high stark verticals, which vertebrae are more or less important is debateable, however interrupt this action anywhere along the spine and the rider will quickly see the results in hanging legs and so on. Now, obviously the squarer the horse is over both

hind feet at the take off the more even will be the stress on either leg, although horses often jump slightly askew as to the placement of the hind feet. Here then, finally the horse is truly airborne.

In the flight phase, the horse keeps itself as well balanced as possible, with it's hind legs well folded up to avoid hitting the obstacle. The spine follows the trajectory, the true and efficient parabola of a given type of jump. A flatter trajectory for the spread fence, a rounder trajectory for the vertical for example.

Finally the horse enters the landing phase. The balance shifts to the forehand as the horse reaches for the ground with it's front legs. The neck again lengthens and simultaneously as the front leg strikes the ground, the head and neck raise. The horse trys again to facilitate another weight transfer off the overburdened forehand. The hindlegs well tucked up begin to swing down to resume contact with the ground and to rebalance the horse, culminating in a normal gait.

One point here is that without any interference the horse may continue at a different gait than the one entered at, or may change leads if the approach was made at the canter or gallop. The jump with it's two hind leg departure interrupts the pattern of any gait, making any resumption of gait an independent one. Waldemar Seunig says that the horse instinctively changes leads in order to protect the

principle diagnols which take the greatest strain in propelling the horse foward at the canter or gallop. However we now know that the leading foreleg takes the greatest strain of any leg during the entire canter or gallop striding sequence. Furthermore horses donot always change leads at every jump, therefore there may be more to it.

Now although there is a bound off the forelegs as the horse prepares to leap off the hind legs, the bulk of the work in jumping is done by the hind legs. The front legs are not constructed with the spring like system of joints as in the hind legs. It is a matter of anatomy and history that the front legs are foremost, post like appendages. It is the job of the front legs to support it's originally over burdened load of the head, neck, and heavy organs of the chest. It is of course this imbalance we have tried to remedy in our dressage work, however regardless of our success we donot actually change the actual joints of the front legs. The front legs may lock to support the horse while at rest, and in motion they aid in directing the movement foward, everything in their design aims at the function of support. They do have some limited pulling power when reaching foward through flexion as in the draught horse, and they have the obvious balancing effect in the riding horse, but their thrusting power is restricted. It is of course the hind legs which propel the horse in riding, and

likewise in jumping. Once we reach a minimum height the force on the front legs remains fairly constant namely enough to initiate the upward bound while in conjunction with some supportive pull, the horse flexes it's hind legs,drops it's haunches. It's abdomen muscles pull against the hind legs from the ribs to the lower pelvis, the muscles of the back contract and the muscles of the rump pull around the angle of the hip and buttocks. A consistant pull over the hind legs. It will be the hind legs that will adjust for the different efforts to clear different obstacles. We can see similar style in the horse jumping from the stand still,although the horse can have no bound off the quiet front legs, the style is still similar, with a dropping of the haunches, and a flexion of the hocks and the same abdomen, back,and rump muscle systems helping to lift the forehand until the proper trajectory is reached when the hind legs take over for the final adjustment and thrust. No matter what gait we approach at, when the front legs brace, in preparation for the jump, the normal gait is interrupted. It is at this interruption where the actual jumping mechanism begins. Until now the horse could still refuse. The jump begins with a series of contractions which cause the shift of weight unto the haunches, very unmysteriously similar types of contractions as in any other gait.

Some have said as we mentioned earlier that there is this croup lowering and it is important to the jump. However this last croup lowering is not critical in itself. The horse has already approached with considerably more contraction than normal. It must be remembered that this process of contraction is fluid and continuous. It is not as mechanical say as the cocking of a hammer on a gun. Therefore talk of one, two, or fifteen contractions is inconsequential. What is important is that until the take off begins, the process is smooth, the horse contracts until it extends, and not in blocks of effort.

Once again it is at this time of set up, that the horse prepares the trajectory it will take. From our work in measuring distances in jumps, we have found that in general regardless of style of fences, be they oxers, spreads, or verticals, the horse can take off from relatively the same place. There are some exceptions as in the great puissance leaps where the horse may approach closer to the base of the obstacle than normal. By far the greater fluctuation in measurement was on the landing side, pointing to the fact that the horse adjusts the shape of his arc or parabola for certain fences without necessarily altering the take off point. In general the horse will jump a spread fence that is equal height and width to an oxer, larger than it will jump the oxer. Given an equal height

vertical the horse will jump it smaller than the oxer, (in terms of distance covered from take off to landing).

The important point in trajectory assumption, or better in correct placing of the horse for the take off is not entirely the take off point, or "spot" etc. etc. It is rather a combination of the right impulsion, the right length of stride, the right set up, the right contraction, the right folding of the legs, and the right bending of the spine. A successful jump is not a matter of arriving at a correct area, some magical point that will work for a given jump, but rather of arriving correctly at a given area.

CHAPTER THREE

THE RIDER AT THE JUMP

At this point it seems important for me to say again that the horse needs special preparation to learn to jump. The same holds true for the rider. The jump can be a culmination of balancing and suppling, and a beautiful cooperation between discipline and free abadon. Good jumping is also dressage and at least needs a very lot of preliminary work and thought.

We I Am are not interested in presenting a stereotypic formula for the rider. There are different styles that work. Disciplines for the sake of discipline alone are only indulgent. Disciplines are tools that should free us for new discovery in our work. However there are some principles that are involved in the jump and they should be understood. The horse really prepares for the jump only a few strides from the fence. Perhaps three or four, sometimes more, and

sometimes only a single stride, as in the case of some bounce type in and out combinations. It is the whole task of the approach to build some rhythmic power,, some momentum some force which the horse will adjust for an upward leap. The chief way momentum is gathered is by impulsion. The better the horse reaches under with it's hind legs, the better it can flex and extend the leg, the more flexible the back and spine, the more the horse prepares itself for the jump.

The horse under the rider s encouragement and tact enters toward the jump building force. All horses can generate enough force or momentum to negotiate good size fences, however to jump a fence properly and to jump multiple fences the force must be controlled. The best jumpers are horses that have the ability and have been trained to control the force they can create. The horse must be able to change the direction of the force without interrupting it so drasticlly as to destroy it. Force is created, then adjusted to compliment the muscular effort the horse will make in the upward leap. If the horse cannot adjust the momentum then it is like jumping from a stand still, all brute strength, which is limited. If they can use the momentum they have created, in the approach the upward leap is greatly complimented.

This talk about force, momentum and impulsion in the approach brings us to the curious relationship between impulsion speed and timing. Travelling at speed the horse has by definition impulsion. In order to move faster and stronger, the horse tracks up well, in a ground covering reaching stride. However a horse can have impulsion without speed. If this is confusing think for a moment of the passage , a movement of high collection, where the horse gracefully dances in a trot with a great cadence and hesitation. A very powerful movement, with great energy yet relatively no speed. It is this concept of power or force, and flexibility of muscles ,tendons ,and ligaments ,unrelated to speed that is at theheart of this idea of impulsion. This concept of impulsion and it's relationship to speed and timing is probably one of the more important factors in jumping. Impulsion is gaining, maintaining and elasticlly executing power, and it may or may not be related to speed. Some riders solve the problem of impulsion in the approach by always approaching on an advancing or lengthening stride. This guarantees impulsion, however it can disturb the timing and limits choices when shorter strides are needed. It is not necessary to always approach on an advancing stride, we may approach on a collected but impulsive stride, the only cardinal rule is donot approach on a failing stride or a weakening stride.

Timing is the rhythm, the flow or cadence of footfalls

in the stride, with which we jump the fence. The smoother we can integrate the fence into the striding or cadence of the approach, the less friction we put on the force we have created and obviously the more power we will have left to jump with. If the horse for example, charges the fence and has to make an abrupt half halt to jump, then all the wonderful impulsion the team has created is lost in bad timing. If the horse approaches with the wrong striding for a specific distance, again the impulsion may be interrupted. Therefore it is most important to integrate the fence into the striding of the horse. During cavelletti this was taken care of by our adjustment of distances from the ground, now it is time to learn to make adjustments from the saddle. On a single spread fence for example we may approach on a longer stride, on a vertcal we may approach on a more collected stride, both having good leg from the rider but more or less rein effects to shorten and lift the collected stride, to let go and lengthen the extended stride. In combinations the rider must not only take into account the type of fence but the number and type of strides to the next fence, and the type of fence it is. For example there is an in and out jump. The first element is a spread fence the second is a vertical. The distance between for your particular horse is either two very long strides, or three collected ones. The rider has a choice, he or she might chose to jump the first spread safely and large, landing big , and continue with two large strides, and take the chance that the horse will be able to

collect itself for the steep vertical; or the rider might opt to jump the first fence more controlled, risk touching it by jumping small but be in good position to take the three collected strides and meet the vertical well. The answer lies in the type of horse, it's natural inclinations, and it's strong points and weak points, never the less this is the type of reasoing that goes intointegrating the fence into the proper striding.

In general the faster we approach the fence the more difficult it is to time the jump. As speed increases the stride also lengthens, so that as we approach the obstacle the number of possible take offs at the smooth end of a completed stride are reduced. Thus the horse must sometimes break or damage strides to incorporate a fence. This gives the impression of bobbling before the fence and destroys the momentum the speed may have created. Speed, though not evil in itself simply seems to have a deleterious effect on timing, especially in the learning horse and or rider. Adjustments for timing become trickier and generally harsher at higher and higher speeds. When a well trained horse jumps at speed it can be exciting and beautiful, but it is difficult.

In schooling speed can and should be avoided. Impulsion though is a necessity. Since we have ruled out speed as an

acceptable way to get impulsion, we must get it through the collection or gathering and storing of power if only for an instant. The horse driving foward toward the bit. Since our horse was prepared on the flat this should be no big problem. We need to get good impulsion without having the horse throw it's head up or down to rush at the fence, resisting the bit. This is how we have to approach fences , full of impulsion with a minimum of speed, so that we can develope timing in both the rider and the horse.

As the rider approaches the fence he or she must facilitate the horse to gain impulsion by staying off the forehand. He should stay seated in a slightly higher seat than on the flat , but in balance with good leg aids which will keep the horse moving straight foward. He should have light hands which maintain contact but can follow the appropriate movements of the head and neck in the jumping horse. The rider should not get in the habit of laying the hands heavily on the horse's neck. If necessary keep the hands wider than normal to prevent limiting the amount of rein available to the horse. If the rider cannot do this, then either more basic balancing work is needed or they must work to overcome the psychological dependence on their hands.

At the same time the rider must keep contact with the

horse, in order to maintain the balance. If the rider gets in the habit of abandoning all contact with the reins at the time of the jump the young horse especially can develope serious habits. They may begin to rush towards the jump or literally through the air, or they may begin to run out just before the fence. It seems recently that there has been an increased prevalence of a very airy style in which the rider abadons all contact with the hands and simultaneously raises the seat way above the horse. The rational being of minimum interference with the back of the horse through the saddle , and the mouth of the horse through the reins and bridle. There are of course many ways that lead to Rome, however this free theory to me is like the one of a man falling down an elevator shaft, in an elevator, and just before the elevator car hits the ground the man jumps up to avoid the crash. It is really the same with the enrgies connected with jumping. The horse and the rider are inseperable, through no contortions can the rider free himself from the same thrusts as the horse. It is wiser to develope a style that is harmonious and connected with the horse, instead of one that is ostentatious and singular. The closer we can stay to our horse the better chance we have of following and avoiding mistakes, and the better we will be in position to help if possible. It is more difficult to ride the jump

this way as opposed to standing in the stirrups ahead of time, but it is far less evil to be left behind a few times as,long as a supple hand does not yank the horse in the mouth , than it is to be in a constant habit of overburdening the forehand therefore putting greater strain on the hindquarters intially in the set up and then the shoulders in the landing and approaches. Furthermore an overly forward position limits the use of the seat and leg because the rider is braced against the stirrups. It takes longer to learn good timing, but in the end the horse and rider will both benitfit from this steadier and less limiting style. In this regard I have often heard the term "natural foward balance", and to me this is a ludicrous idiom. Balance is equipoise and it is not forward or behind. Balance is a tool and a gift that riding can lend us. It is so important that impositions on it would only be indulgent. The touch of balance in a good jump is one of the highlights. To leave in balance we must approach in balance.

When the horse reaches the take off area it begins to set up . Knowing what we do about the set up, the rider should not get up too early, out of the saddle and add more weight for the horse to pull up with the hindquaters . We are left with the raised forehand, the horse poised ready for flight. At the moment the trajectory appears satisfactory the horse will jump. This is a very fast wait for the rider

a classic levade of sorts, it is a balance of controlled power. In actual time it is a mere ~~sixth~~ fraction of a second or so. This is a time of test for the rider. He or she must be with the horse or they will be left behind. Once the horse begins the set up there is really nothing active that the rider should do, other than staying in balance, rising not entirely off the stirrup but off the knee which maintains some grip, and slightly foward over the horse's withers. The heel should be driving downward with some tension through the calf to help keep the leg straight, but not squeezing the horse as to push him onwards it is a rather passive stance , firm but aware. Many riders at this point throw the reins away. , the appearance is one of safety and not damageing the horse in the thrust and flight phase, however upon resumption of contact there is a grappling with the reins usually just as dramatic as the release. Nothing is gained if the horse is not jerked in the mouth on the take off but is jerked on the landing, this of course is no advance. If the reins are abruptly thrown away, they are usually abruptly gathered.

The rider should now not fall apart and abandon all aids in an effort to follow the horse, this would only confuse the horse. They should hold evrything steady.

The horse then leaves the ground with a powerful thrust off both hind legs. As it becomes airborne it will stretch it8s head and neck. The rider should not plant his hand on the mane or lay both hands heavily on the horse's neck

This is not fair since it can leave the horse short of rein and check him in the mouth with the bit. There are some schools of riding and jumping which teach students to use their hands on the horse's mane, or they even place a strap around the horse's neck for the purpose of holding on during imbalances, etc. This practice can encourage a psychological dependencey on the hands for balance. This is difficult habit to break for students who learn this way, for it seems to crop up in any stress situations. It of course negates any handiwork, especially when it might be needed. It is far better to learn immeadiately of the necessary divorce between hand and balance. Once the rider establishes a connection regardless of it's validity , between security and the hand or mane, then a true independence of hands has greatly suffered and again it is difficult to break. The rider should be in balance moving only to follow the bending of the horse's spine over the fence along the parabola of that given jump.

As we have said, there are of course great differences in style when it comes to this part of the jump, some high and airy above their horses , others close and tight. Balance is the important thing and this good riders have in common.

While the horse is in flight, shifts of weight by the rider can actually turn or twist the horse, and effect the landing. Sometime they are done deleberately to prepare the

horse for a quick turn on landing in a speedy series. There is a risk here of disturbing the horse's balance and straining a given leg on landing, especially because it is usually over large fences and at some speed that this is done. The risk and reason must be weighed if such an action is attempted. The rider must certainly be well aware of what is happening. Perhaps the fence can be jumped from an angle but keep the horse straight or concentrate on handiness through the series.

The landing is perhaps the harshest time of the jump for the rider, as there is some shock upon hitting the ground, especially from higher jumps. If the rider leans overly foward , they place added strain on the shoulders and front legs, as well as risk a fall over the horse's head should a mis step occur. If the rider is too far behind, they can land heavily on the horse's loins. This will cause some pain to the horse as there is very little muscle or protection for the organs underneath. If this is done too many times the horse will begin to hollow out it's back through the jump in anticipation of the rider's thud. Obviously this can destroy the horse's trajectory and bascule, and demolish balance in the jump. As the horse hits the ground the rider should not stand firm in the stirrups or let the leg swing out in front in an effort to land on his feet. Rather he

should break at the knee , as always, and should take up the shock in the thigh ,knee, and lower leg, trying always to maintain balance in the upper body resuming contact with the saddle gently and smoothly. If the rider remembers this then the resumption will automaticlly be smooth.

Lastly unless intended the rider should be aware and ride out the next few strides after landing straight. This is especially important in training and learning situations. Quick turns and circles upon landing do not build the horse's confidence, because by circling we are using the added work of circling to slow the horse , it is too hard on the young horse , and the horse will not learn to relax after each jump. It is better to have the horse appreaciate the relaxed reins and confidently slow down itself, otherwise later the contortions upon landing will become more and more complex, and in any series of jumps the horse will get very excited. Careful , slow work over early fences can make the difference, in the horse's attitude over fences, between them, and on the way to the next one.

I believe that we have looked at the rider's duties and the nature of the jump, however, we have perhaps missed some (or all) of the feelings of the jump, some of the smoothness and excitement that is there. Perhaps we can go over it again. As we approach the fence at the canter, we feel the usual

triple beat rhythm. If we concentrate on that rhythm and watch the approaching fence we should be able to isolate the movement and loose conciousness of speed, and gain an accurate conciousness of the rhythm, one two, three, one, two, three, etc. The most obvious feeling as we draw nearer will be in the higher rocking action of the canter. We can feel a slight stronger twisting in our lower backs as we sit close to the horse, with some pressure on the knees and thighs. If we are approaching combinations we will be aware of the number of strides. As long as we concentrate on the rhythm, we will be feeling the horse along more than anything else. Close to the fence there will be a breaking action of the front feet, and a very short wait for the rider. The rider's momentum will have a tendency to carry him foward past the balance of the horse unless he is aware ahead of time and is in good position close to the horse and on the saddle. The rider will find his seat settle for an instant and then very quickly the horse will be in the forehand rise. The rider will allow himself to bend slightly foward and in the case of steep trajectories may rise somewhat out of the saddle at the take off, so his knees will take up some of the thrust without displacing the lower leg backwards. For this reason the rider should also saty firm but relaxed , through the back,the knee, and foot with the heel set below the toe and

and slight tension in the calf to help to steady the leg. The knee of the rider should always stay broken to allow for absorbtion of shock, and to keep the leg in proper position, this also guarantees that the seat will never be too far above the horse straying from balance. The rider should think of a folding instinct instead of a stiff legged rise which will push the rider up and away and not allow him to conform to the bascule of the horse. As the forehand rise continues the jump will be blocked from view, in front. The rider allows the horse to balance with a careful light hand and a secure seat. At this point of learning, the rider should not lie down on the horse's neck which encourages further displacement of the leg backwards, and a leaning on the hands.

The thrust may be smooth or erratic. The rider will learn by practice and experience just how much to lean into a individual effort to be in balance. Most important at this moment of thrust is not to pull on the reins regardless of an imbalance. The reins must always be approached as sacred. The use of hands for balance during the jump whether they grab the mane or a special strap around the horse's neck are really retardant aids. More than a mere temporary physical aid, they are a psychological crutch, a halfway measure between total committment to the jump. In reality they do so little physic-

ally, yet so much mentally that they should be forgotten. Students who learn to jump with such supportive hand action have a seriously flawed style that can errupt in pressure situations and will obviously limit a true and independent hand. It must be realized Iam not against a matter of physical safety, we have said no matter is cut and dried, there may be a special case where a hand aid is needed. In general such action must be throughly thought out since it has considerable ramifications in allowing a rider to reach a clear controlled abadon in flight. Any hesistancy like a germ will rob the rider of some confidence and this we have alr ady said is one of the most important qualities in jumping.

Once in the air the rider should remain quiet with a light free hand and relax but keep together. The leg should be kept down perpendicular to the ground. Perhaps one of the more interesting feelings and certainly a point of some trouble for begining riders is at the rise and leap. The rider has to realize that there will be a cessation in the triple beat rhythm of the canter, (when approaching at the canter) Many riders and students have difficulty because they seem to want to continue the three beat rhythm through the air over the fence. Now when the fence is small the rider can get away with this, the time in flight is so short that there hardly seems to be any cessation in the triple beat rhythm of the canter, and thus the rider just rolls over the fence. However over larger fences they begin to have trouble because

instead of holding a balanced jump position in flight, they unfold in mid air with a whipping action through their backs necks, and heads. This is directlty related to not being able to stop the habitual cantering rhythm. The canter stops at the take off, the rocking rhythm is interrupted, the rider must remember this at the last stride and the moment of take off. They must hold in balance and not whip their body and horse over the fence. Let the horse jump and the rider should follow.

The term follow, is a common term in jumping, and I use it as have many before me. However in a sense it is not the right word. Follow denotes a tardiness on the part of the rider during the jump. But following here is meant to be an instantaneous reaction to the horse and not a blind consequential drift. Follow here means to follow as a cutting horse follows a cow, at times there is simply no time lag between action and reaction, the parties are so attuned they move as one. This does not always happen but it can be greatly increased with practice and work. This is the essence of harmony, it certainly is artistic and one of the highlights in jumping.

Finally the horse descends and lands. There is a feeling of a crescendo then a dropping, as the horse drops below the seat of the rider. It is a most unique feeling of being in mid air alone, as it is one of the only times where the

horse's head and neck might not be up in front of the rider. It is certainly and odd feeling especially during the rider's first few drop jumps. The obvious tendency is for the rider to lean back and let his legs swing out in front, either pulling on the reins or losing contact all together, in an effort to compensate for the steep descent. This necessarily puts an added strain on the horse's back during landing, which can result in the horse dragging it's hind legs over the obstacle. It also disturbs the horse's mouth through the reins and thus compliments an already inverted pressure on the horse's spine. Finally it adds nothing really in terms of security for the rider and in fact disturbs his balance.

The rider must concentrate to break at the knee, and take up the shock of landing throughthe knee, thigh, and seat. So that one, we donot lose contact with the horse through the lower leg, and two, so we donot overburden the horse's relatively delicate back. There is another feeling on landing and this is the definite raising of the horse's head as the front legs strike the ground, simultaneously the horse's back sags a little. At this point the horse is some what ewe-necked, and if the rider applies any pressure on the reins he forces the horse into more bending of the spine forcing a tightness that can result in a strain. The rider must allow the horse to bend himself and resume contact with the

horse's back carefully, and lightly. Finally the hind legs of the horse come down and the rider settles into a resumption of a normal gait.

CHAPTER FOUR

TRAINING THE JUMPER
SOME PRINCIPLES AND PROGRAMS

When we spoke of the interplay between impulsion, speed and timing we thought perhaps it was one of the most important problems in jumping. Now before we go any further, I think it is time to speak of another important problem in jumping . More than anything else this is a problem for the rider. It is a confidence, not a foolish daring, but a careful controlled confidence. The biggest problem as I see it now is the balancing of the knowledge necessary to prepare the jump, and the control needed to carry it out. This is not to say that the rider will or can rid himself or herself of the emotion in jumping challenging fences, but it is to say that unless the rider can set up a system for themselves that will function in spite of emotions, then they will be mimiting the team of horse and rider. The rider must

take all the care and caution in preparing the jump. This is the time for planning and decisions, but once a decision is reached the rider must not falter or doubt, for any insecurities will certainly be transmitted to the horse, and they are very detrimental, especially in the young horse.

There is often in teams of horses and riders an odd balance of confidence. Some riders rely more on their horses than they do on themselves. These are usually experienced well trained horses. Some riders have a great deal of self-confidence that they transmit to the horse. These riders are usually good with young or inconsistant horses. However the smoothest, most graceful teams are teams in which both the rider and horse are confident and bold, and this only comes about after years of patient practice, work, and knowledge. Until the rider and the horse fully understand the jump, there will be too many petty inconsistancies that will occur and reoccur and they will not be able to place them in their proper perspective. This balance between a constant objectivity and a controlled confidence is a great task, that cannot really be completed.

Let us speak here about a few more principles in training. For us training is teaching without cruelty, and in fact with confidence. If we are trying to fully understand equitation than we should first ask why without cruelty? Not

that we might want to, but why limit ones training with this altruism, there are practical reasons if altruism is not enough. To see it clearly we must look carefully at the horse oriented to punishment or the fear of it. Violent punishment works through association. The horse performs to avoid punishment,to me this is a negatively oriented training system. To force this type of performance we rely on the horse being more afraid of us than the new obstacle, afraid enough to subject it's own will, such a horse is extremely submissive. His performance is governed by fear. This is a dangerous direction to aim your training. When you consistantly force your will by definition you destroy the horse's will. A person might say, that all Iam interested in, is a horse that performs and horses that are trained with fear often will fall over backwards to please a tyrannical rider, however these horses have no pride. They are easy to spot blinking wildly , eyeing their masters. Furthermore these trainers are in a precarious position, since someday the horse will encounter something it fears more than the rider and the rider will be left hopelessly out of control. These horses are cowards. Such horses will panic. It is unfortunate that the horse can perceive and understand cruelty as a form of disipline, many animals cannot, they must be trained entirely positively with no

disipline or fear. They are respected, and they respect. They are trained and never broken. This is how it should be with horses.

Timing in training is the ability in actual work, to almost instinctively know what and when to ask something of the horse. The most important feature of good timing, is to avoid bad timing. If you are not sure the animal knows what you areasking for, stop. Nothing regresses training like confusion. The rate of progress in training often hinges on knowing when we have actually progressed. Do not wait with rewards until the animal performs perfectly, by then it is too late. The crucial point is when the animal tries, the attempt and not necessarily the complete success of it. One has to learn to recognise concessions in the horse, so that we may reward the horse and train him instead of breaking him. This is not to say, that we should be satisfied with sporadic responses sometimes correct sometimes not. We are talking here about that common initial impass in training for something new. Training is continuous, the great feats come out of the same process as the lesser ones. Smooth gradual developement is the ideal.

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It is best to begin our first jumps over the stadium type obstacles. These are usually more colorful jumps, but more importantly they are jumps that are constructed so that they will fall easily if the horse hits them. They are usually poles set in shallow cups so they rest there unless they are squarely rapped , then instead of holding fast they collapse. The face of these jumps should be at least 12 feet. If they hace wings which are the same gait like standards we spoke of in cavelletti they will help funnel the horse and make for a well defined jump. They can also help to discourage run outs, as they center the face of the jump. At this stage the horse should not be pushed too fast. The jumps should be kept low, but varied as much as possible, until it becomes rare for the horse to refuse a jump. The question of height is a relative one, I would not wish to discourage the slower horses or to hold back the really talented ones, but in general, with young horses it is better to increase the spread rather than the height since most young horses are reluctant to jump out. It is best to stay with a comfortable low height and vary the style the fences than to start raising the height too soon, As in the cavelletti we must take time to build the horse up gradually although mentally he may well be prepared to jump higher chances are he does not have the muscle

for too many or too high jumps. It takes several months depending on indivdual horses , more, to jump 10 or 12 jumps safely several times a week. Often overwork too early will not be manifested until later years when the horse prematurely becomes unusuable due to unsoundness. The trainer must take the greatest pains to build the horses body before testing it with much jumping.We must gradually build the horses body to be resilient and supple through the increased driving impulsion and great flexion of the approach, the lengthening on the leap, and the shock on the landing. A jump can be constructed to test all these parts of the jump equally or to stress any certain phase individually. In our beginning jumps we try to practice over jumps which to a degree equally stress and test all the phases of the jump. This way the beginning horse and rider can develope harmoniously. These jumps are usually the stadium type obstacles. Later we will spend time on specialized jumps like ditches, banks, drops and so on which accentuate certain phases of the jump.

In general there are four types of stadium fences, that we begin training over. Spread fences, are fences where the elements of the jump are placed in an ascending order, through the depth of the fence. The spread fence is perhaps the easiest fence to jump. For one reason it's idea is

is quite visible and secondly, the rider can approach the fence quite closesince the rise of the fence usually aproximates a mild slope or trajectory. This allows the young horse some latitude in collecting his knees up. However the spread usually encourages the biggest jumps, because the trajectory must peak at least over the last or highest element of the entire jump. This makes for large wide leaps. In all the other jumps the peak of the trajectory is more over the middle of the fence, therefore the horse is usually descending somewhere over the fence. Obviously the spread fence is excellent for encourageing the horse to jump larger,bolder and out more.

Often in the beginning , green horses will pop over fences before they realize a style. The spread fence can help to teach the horse to lengthen out through the air, and jump reaching out, and not just up. Realizing again that distances are relative, the spread should be at least 3 feet or 4 feet wide , the height need not be very high , but one should get at least that width or else there will not be enough distance for the horse to realize the change in style needed. Even though the spread fence is 3-4 feet wide the trainer should take the time to fill the jump up and not leave it especially airy looking, as the young horse might

misunderstand the idea, and become confused with the apparent trap.

The vertical fence is rather self explanatory. It is simply constructed on one vertical plane. Verticals are stark and by definition have very little depth. These fences can be difficult for the beginning horse, as they are tricky to judge. They are excellent training fences though and they are necessary. They present the added challenge of making the horse fold it's knees quicker and bend the spine around the fence. In general these fences show the steepest trajectories, therefore tend to be the smallest in terms of ground covered during flight, but are often the highest with the greatest bending of the horses spine. It is of course over the steep puissance walls where the high jumps are set. The horse's training must include many challenging verticals so that we gradually teach the horse to bend and fold elegantly around steep obstacles. It is a common fault for the learning horse to touch stark obstacles, either because they are taking off too far back and flattening out the trajectory with too little bend, or because they taking off from too close and cannot collect themselves by picking up their knees and rounding over the obstacle. It takes practice and time. The trainer should be careful not to overdo it with the young horse and destroy some confidence. Success at verticals comes with a technique and a calm quiet approach with much freedom in the air. The vertical is

abeautiful jump when done correctly, it takes finess, boldness anf grace. A good healthy horse will come up like a dolphin and bend around the fence.A good rider will do all he can to steady the horse on the approach, build great impulsion and then without dramatics allow the horse everything it needs.

Oxers, are jumps of parallel vertical faces. They present the steep trajectory of a vertical plus the added second element of a spread type, usually at the same height as the first element. Oxers can be difficult because sometimes it is hard to notice the depth. These jumps need care in jumping because if jumped too steep the horse may have trouble with the second element. The rider should encourage the horse to jump oxers, strongly, and large since there is the risk that the horse may not at first realize the depth or the steepness of the take off. By the same token the rider cannot let the horse rush these fences or the horse may not be able to curl up over the first vertical face, and will usually hit the top of the fir t face.

Finally we have broad jumps. They are usually low wide fences, ditches, water, or simply a series of closely spaced low poles. It is standard procedure so to speak to move with more speed toward these fences and rely more on momentum

than take off to cover the relatively long distance. Schooling over long rail jumps, jumps set low but with many poles can encourage the horse to land carefully with good follow through of the hind legs . The horse during these fences has little rounding of the spine and generally jumps flat reaching way out with the front legs. In broad jumps the rider must take care to hold his balance as a lean backwards can be heavy on the hores's loins and disturb the hind legs on landing, which can and often does cause a foot in the water over jumps like this. The rider must always remember about good follow through of the hind quarters, and what causes it. Light hands for a free head and back, and a careful balanced seat prevent dragging hind legs. Again interrupt the spine anywhere along it's course and the results of dragging legs will be the same.

The following is a summarization from some of the data we have collected about the jump. We used three types of fences, and measured the total distance covered during the jump. We also measured the distance from the take off point to the first face of the jump. Finally we measured the landing, the distance from the first face to landing, and the distance from the last face to the landing. I beleive the results give us a further picture of the different things that happen over the different fences. Each of the fences we used

	vert. 3'6"	spread 3'6"	exer 3'6"
total distance	8'2" 6'11" 8'1"	9'11" 10'10" 10'8"	8'9" 8'6" 8'10"
take off to first face	3'1" 2'1" 3'4"	2'10" 3'10" 3'2"	2'6" 2'6" 2'9"
landing first face to landing	5'1" 4'10" 4'9"	7'1" 7'0" 7'6"	6'3" 6'0" 6'1"
landing last face to landing	4'10" 4' 8" 4'6"	3'10" 4'8" 4'8"	3'0" 2'10" 3'2"

(figure 21)

a typical selection of data over the control fences

was three foot six inches in height, the spread and the oxer were both four feet wide, yet there are interesting differences. First we saw in the total distances, the tendency for the largest jumps to put in over the spreads. The interesting pint here, is the relative sameness in the take off distances, by far the greater fluctuations occurred in the landings (from first face to landing). This of course points to the differences and the importance of bascule in the different flight patterns. Secondly we noticed that although the oxer is the same height and width as the spread, there were obvious differences. We saw for example an overall shortness in terms of the total distance, with both shorter take offs and landings in the oxer jumps. This points to the idea that the horse jumps higher over the oxer, or at least has a steeper parabola, while the spread assumes a flatter ground covering arc. Thirdly we saw the vertical , always had the shortest distance. The vertical usually shows the steepest trajectory.

We start with these fences at the trot and canter, trying to develope a smooth style over them. If the young horse pops over them at this point the rider and or trainer should not be overly concerned, with this difficulty, simply go to more work with the spread fences, keeping the horse quiet and teaching him to reach out more in his flights. What is important is that the horse go quietly from the walk through the trot and canter over and around the fences. As the horse progresses so that there is some fluidity in the

jump the fences may include small combinations of fences. These small straight foward grids, or gymnastic patterns, should always have at least 21 feet between them and may be increased to 24 feet, depending on the type of fence. (That distance is measured from a line perpendicular to the last pole of the first fence, to a line perpendicular to the first pole of the second fence) The horse should be made to move straight through the combinations. Care should also be taken to keep the horse deliberately in one gait through the combinations. The rider should also keep the horse moving straight and foward in between fences. The rider must come back down to his horse as it were, in between the fences. He should not stay up on his feet , as this would encourage speed, and the loss of the rider s leg would lead to crookednes or refusals at the second element. Combinations may call for more unusual adjustments than single fences, but the rider must ride them one at a time, complete with a landing, and a resumption of normal striding, or specificlly adjusted striding, even if it may only be a single stride. Up till now we have slowed the horse or stopped in between fences so there was always a leisurely pace to our work. often minutes between successive jumps. Now this pays off because our horse will be accustomed to relaxing upon a successful landing. Now when we begin to ride through series of jumps the horse is not likely to get over excited. When we start

with series, of jumps we start with three or four, and gradually work up to eight or so, we usually save this for later in the particular lesson and we donot use it more than once a week or so in a training situation with a young or first year horse. The rider should stay relaxed through the series and ride with a plan in mind, always one fence at a time. Even if the horse is not calm the rider must endure and exude confidence. At this stage of training we should never get the impression that the horse is building to a crescendo at any time during the series, it should look and feel as if the horse would be able to do it all day long at the same pace. We aim for a deliberate but independently quiet round. One of the most important ideas or goals in this early work is to get the horse accustomed to coming back to our aids and control after he has leapt almost free from us. It is only with this breathing through a course that the team can successfully encounter mulitple obstacles. This breathing should be familiar for it is the same as in our extension and collection work on the flat. If a bad seed is sown here so early, later it will take more and more contact, and harsher and harsher aids to bring the horse back to the rider, between larger fences. We must cultivate relaxation between fences, especially with young spirited horses. On landing the rider should make sure the horse has room

to move with the rein, and sit close to the saddle with good contact through the knee and a flexed leg so the resumption will not be harsh to the horse, the horse will understand this courtesy as it will permit him to relax and not be wary of the rider. This is not the time to play " Grand Prix", it is a time to go slowly between fences, taking all the time we need. The horse should go deleiberately foward , and not overly react to the changing obstacles.

Due to the interruptive quality of the jump which we have already discussed.(refer to CH.2) We are faced with having to change leads at the canter in order to facilitate turning and proper bending and flexing in the approach. Obviously we are not going to do a whole series on one lead, so we must be able to do simple flying changes of lead when we need to. To begin to teach these simple flying changes we canter over a fence, and on landing we settle into a trot or walk. We then bend the horse in the opposite and strike off on the opposite lead and continue toward a fence set up in that direction. We continue this practice until we gradually can reduce the number of strides at the trot between the canter transitions. After some time we will be able to change leads without the interruption of the trot. As long as we keep the horse straight and take our time, the horse will develope so that a mere change in the position of our leg will induce a complete change of lead in the canter. Once the horse is able to do this we are ready to do complete series or courses

of jumps at the canter entirely.

As long as we proceed carefully and do not overtax the horse, refusals should be kept to a minimum. If and when they occur as long as they are not habitual in nature, they should not be overly regarded. It is incredible to me, that learning riders are often satisfied with a sixty or seventy percent successful performance by themselves, but learning horses are hardly permitted ninety percent successful performances. If refusals become habitual in type or amount, by this I mean if the horse by a consistant run out to the right,or a stop, then the trainer must analyze the ride, the horse, and the weakness. We will spend moretime on this in the next Chapter .

From now on we will, continue alternating gaits, over sigle fences and over series, as the horse learns to go comfortably around and over fences in good timing.

CHAPTER FIVE

TRAINING THE JUMPER

" SOME ADVANCED PRINCIPLES AND PROGRAMS "

Once we have the horse confidently jumping stadium fences it is time to introduce more advanced stadium jumps and some simple cross country obstacles. Although we will spend more time on cross country obstacles in the next chapter, our work over these fences now should be restricted to the more straight foward obstacles. Our purpose in these fences is tp present the horse with obstacles that will not yield, especially if the horse has been striking rails in the stadium. It will also braoden the horses experience, with increasingly varied jumps and allow him to move on a little stronger than in the stadium. Alot of our work now will be in extending and collecting the horse and his stride. The striding will be more and more adjusted without losing impulsion, and keeping the horse relaxed throughout this time.

More advanced work in the stadium is a matter of several factors. One, the fences will be higher, wider and in general larger. Two, we will encounter and train over more difficult combinations of these fences. Third, there will be the problem of the position of these fences, in regards to turns before after and during combinations. In the case of the first matter, the horse and rider will begin to handle larger fences quite naturally in a steadily progressing training program, here the trainer must bear in mind that all horses will have a limit and not all in fact few are capable of the really great Grand Prix leaps, therfore the trainer must keep a careful eye on the horse, signs of resistance in a usually willing horse, consistant ticks by a normally careful horse, are signs the horse may be at it's limit. The second matter will usually be a matter of ascertaining the correct number of strides in relation to the type of fence. We will spend more time on this under tempo later in the chapter. Obviously though, there are infinite combinations. How the rider jumps a first fence in a combination and what type of fence it is, will determine his choice or lack of one on the next obstacle. The same problem exists with turns, and their shortening effect on the horse's stride in relation to an approaching fence. In general the rider must always play the distance against the trajectory of a given jump, always taking care

to include the effect turns will have on impulsion and length of stride. As obstacles and series become more and more challenging it will be up to the trainer to familiarize their horses and riders with original fences and combinations to prepare them , always with care not to overtax, or overface the horse in this more advanced work.

There is much unknown about the horse's vision, especially the role it plays during the jump. It is an exciting field and very important. First we must talk a little about the physiology of the horse's sight. The horse's sight is remarkable because they have use of both monocular and binocular vision. While grazing the horse may look monocularly out of either eye to give it a sight range practically entirely around itself. When the horse wishes to view something directly in front as in the case of an approaching jump, they switch to binocular vision. However because of the position of the eye's in the horse's broad head they cannot see objects binocularly closer than probably four feet or five feet. For any closer inspection the horse must turn it's head to look out of either eye, Most certainly the horse relies on other senses to compliment his alternating vision. Furthermore because of the shape of the eyeball itself, the horse must raise or lower it's head to focus on objects at dif-

fering distances. Objects viewed close at hand are viewed through the upper part of the eye, where the distance between the cornea and retina is the greatest, objects viewed afar are looked at through the lower part of the eye where the distance between the cornea and retina is the smallest. There fore the horse may raise it s head to view things far away and may lower it's head for closer inspection. Therefore in approaching the jump not only may the horse switch from monocular to binocular vision, but will also move it's head up or down to facilitate focusing on the target which finally dissappears from monocular sight at four or five feet, and must be picked up by binocular vision after that. Our recent work seems to point to the horse using both binocular and monocular vison alternately especially in the early take off phase. The ramifications of these observations and facts are that the horse needs some freedom for mobility of the head during the jump. If the rider allows the horse some latitude with a sensitive light hand , the horse will do it8s part. It is important for me to point out that as a rule this does not mean the rider should abadon all contact with the horse, as this break will eliminate any team work, and positively disturbs the preparation we have established through our long work on the flat. Intangible as it might seem, it is very true. For it is through the systematic developement of

these balances through the use of our aids, that we train the horse. The training then is our language, we develope aids which become the letters of our alphabet, combinations of aids become words, and we in turn must listen through the same language to the new words of the horse. Always , always when we issue an action , a rein effect a leg effect , there is a reaction from the horse, resistance, stiffness, or yielding flexibility, the rider must always listen for the answer to his command, it is utterly ridiculous to go about issueing orders and not even look for the results. If the intital building blocks of training are not concise and correct, the picture will simply become more and more confusing to the horse. Since training is continuous , we can never abadon our system of balances, we can and must learn to stop them, to control them, but never through them away. If we leave ourselves at a loss for listening, we become a passenger. If in jumping we abandon contact with our hands we cut off a very valuable line of communication with the horse, and as we have already said when we go to resume it, it is usually as rough as the when we gave it away. We should learn to listen without interfereing and this is unequivocally possible.

There is another matter of concern, in the horse's vision, and it has to do with the horse's color vision. The structure of the horse's eye is such that the horse is lim-

ited in perceiving colors, even though it is endowed with it8s other facilities. The horse sees generally in a monochromatic scale of greys with some perception of greens and yellows. The great splashes of reds and blues in increasingly loud jump courses really effect the crowds and riders more than they effect the horse. Most probably it is the arrangement of blacks and whites , shadows and shapes that present the biggest visual obstacles to the horse. In our analysis, of long jumping series, and courses this is important to the trainer and rider. This simple revelation has subtle overtones when preparing the young horse thoroughly and on analyzing courses objectively.In setting out to analyze a course of stadium jumps, either to plan or to execute them, the rider must limit confusion. The colorful stadium can be a visual splash that can add to the rider's job, but it need not. The rider should spend more time catagorizing obstacles to type and trajectory, and then combinations. This will give the course an overall sequence and rhythm. Then the rider can try to establish tempo, a more exact plan of the speeds, in between all the fences and around the course it self. In tempo, I would consider the striding or the distance in between the jumps with particular reference to the horse which the rider will be on.The distances should be noted to see if we will try to lengthen striding between combinations into a given fence, or shorten striding , in certain approaches. In judging

the striding between combinations there are two main considerations; one , the distance between the obstacles, and two, the particular type of obstacle. For example suppose we have a simple in and out . We know from testing our particular horse that we can make up the distance in between in probably three shorter canter strides or two very long ones. The first fence is a stark vertical, the second is a fairly long spread. In order to be safe at the first fence chances are we will approach a little slower and collected in order to geta high exact trajectory. This in turn will limit how much ground we cover on landing. Being a vertical we will cover less ground than if the first fence were the spread. Therefore we will have a longer distance to cover between the fences. The second obstacle the spread presents us with an option for although it is fairly wide , the trajectory is mild and we can approach spreads rather closely. So perhaps the best procedure in this example would be to approach the vertical slower and more exact, and thencontinue with the three shorter strides to the spread, since one,it is not overly large and two, the distance the other might just be too long, making the horse really stretch. The important thing to remember is that distances between fences are to be considered along with the type of obstacle at the end of the distance, and the correlation between the two is more important than either one taken individually, even

though they must be jumped one at a time.

One might ask how lengthening and shortening occurs between fences. The answer is of course the same way as on the flat.There is more impulsion with less of a restraining hand, so that the horse's stride flattens out, covers more ground and moves faster. The rider should be aware that the distance covered during the moment of suspension at the canter or trot will also increase, as it is extended. Likewise the stride becomes shorter and higher when it is collected. We help the horse approaching certain fences by adjusting this angle as it were. When we approach hypothetical spreads we can lengthen the stride, encourageing flatter trajectories. When we approach verticlas we approach with equal impulsion but on a higher collected stride to encourage a high steep trajectory. This is why good jumpers must develope good gaits and a flexibility of the spine, in order to adjust the strides at will.

Once we have an overall rhythm and tempo, we can pay some attention to the psychological elements of the course. Psychological problems are entirely personal. What bothers some riders and horses does not bother others and so on. Here the rider must know himself or herself as well as the preference of the horse that they are on. Psychological problem fences

should be approached like all others, the only difference is that they usually leave less margin for error. If the rider does not dash for this type of fence to try to conquer it, they have a much better chance of success. Finally a rider and horse should practice over any type of fence that seems to present problems until both are comfortable with any type of fence. We will spend more time on some of the mental problems of testing fences when we talk about cross country fences. It is the forte of cross country fences to present such problems tothe horse and rider.

If the horse has been brought along carefully and in time with it's abilities, problems should not be too overbearing . However if the problem of refusals becomes habitual it is usually not a particular fence that is the problem. Particular fence problems just take patience, building from small obstacles of that type. It may be that a certain fence exposed the problem but now the trouble and the answer lie in the approach. In the approach is where our work must be focused.

Let us look at some common faults in jumping and perhaps some aids in correcting them. At times whent e horse ap roaches an obstacle that is too big or somehow intimidates tye horse, he will turn out before the fence. If this is simply the case it isnot overly important. If the run out is quite violent as in a quick dropping of the shoulder and especially if

it begins to lend itself to a pattern , then we have a problem. It is the first task of the trainer to carefully analyze the problem. First and foremost is the obstacle wrong, is it an impossible distance, is it too high or wide for the particular horse, is it situated in very bad lighting, for instance is it situated just in some dark woods after going across a bright meadow, etc, etc,. Second is it simply a disobdience? If we can see that it is a disobedience, our corrective work will commence. We should make sure that the horse is properly warmed up, then we should go to a small but troublesome fence, a fence which is certainly within the capabilities of the horse. Most run outs or refusals begin from mistakes in training or faulty riding, rarely are they entirely the fault of the horse. Therefore the rider should ride the horse exactly toward the fence,with good impulsion and definite contact. Any thought of possible mistakes should be expelled, each attempt fresh. If the horse has developed a tendency to run out to the right, the rider should approach from a slight angle from the right ,in order to make it more difficult for the horse to turn against that direction. If the left, vice versa. It is essential here to distract the horse from any fixed mental state, of planned disobedience. If the habit is a chain reaction , we can be successful if we interrupt the chain anywhere, then we can

begin to get the horse fresh again , and receptive to a new idea. If we can stop the horse from running out to the right at least we get him looking for a new direction out. When the horse is distracted from the planned or habitual disobedience than the rider introduces an alternative,namely going over the fence. The trainer must be exact and at the critical time get the horse to jump in any way, then quickly reward the horse for choosing the correct choice. It is really only bad timing if at first the horse picks the wrong choice and runs out in the opposite direction, this is not the time to punish the horse and increase the chaos. The trainer must try again and focus everything on the other side of the fence. After that, it is a matter of patient work to practice until the horse becomes consistant again. Refusals tend to reoccur under stress so the rider and or trainer must rebuild the horse's confidence in order to ease the tension. In general when we come upon a disobedience, a few strokes with a blunt type crop or bat , and then a reintroduction, after calming down will usually solve the problem, however there are many of temperment where this does not work, here it will take some steady and sometimes immaginative work to get the horse right again. There are also times whenthe horse approaches a obstacle then will stop, merely slow down to a halt. The same principles apply here. We must again begin to show the horse good work, and give the horse a chance to jump the obstacle.

In the case of stops , as refusals, the problem lies in impulsion. Either the impulsion is not being created, or it is being arrested in the approach, the seat and leg and sometimes the crop must do the work of bringing the horse in straight and bold, and the rider's hand while maintaining contact and straightness must be careful not to limit or interrupt the impulsion in any way. Sometimes in spite of good riding the horse will stop in a spoiled way at the fence. If the fence is fair than some discipline and again a reintroduction after the horse has settled for a second, will usually correct the situation. If not the fence has to lowered until the horse will jump it , then after several times, good habits will again begin to take over, and we can test the horse more.

For the most part refusals come from overfacing the horse, either because of improper distances between obstacles, or because of the simple matter of an imposing effect on the horse. While it is true that some horses are consistantly reluctant by nature and feel imposition from any new obstacle,it is also true that with consistant gymnastic work, and a careful preparation over the cavelletti, almost any horse can be trained to jump three feet or more consistantly. The whole trick to it is in calm deliberate preparation,over the correct distances, and proper heights. What seperates the jumpers , is the time it takes to train these things to the horse, for in a commercial market this is a most important consideration.

Some horses will consistantly rush jumping, either in the approach or through the air and on landing. The simplest way to correct this is by placing a single cavelletti either before or after the jump. To slow the horse in the approach, the cavelletti should be around 6-12 inches high, and be between 15 feet 6 inches and 18 feet 6 inches before the jump. To slow the horse after the fence, one or two cavelletti may be placed 21 feet after the jump, and each additional cavelletti should be one strideor aproximately 10 feet 6 inches after the first pole, or 31 feet 6 inches from the jump. This will usually slow the horse , as he will be conc n-trating on what is up and coming.

In general work with problems of refusing or any disobedience with the horse, there is one aid above all that the rider can use. It is not a matter of equiptment, or even exact riding. The greatest success with correcting refusals comes when the rider can establish a mental control of total confidence, that the horse will eventually perform correctly. In spite of failure, even consistant failureat a certain point the rider must maintain this powerful force. After a while problems will begin to settle out, and the horse will begin again to respond to the patient rider. It must be remebered that we are usually dealing with the young and immature horse in early jumping training, and often times very good jumpers strat out inconsistantly, it many times takes years before a horse will settle out to the demands of jumping and see it as more natural, and not so disturbing. With sensitive

horses it takes time before they realize the limits and get a comfortable style among them.

If the rider can stay patient, and keep the powerful intent punishment will become obsolete. It is difficult to admister the proper amount of punishment on horseback, since it is usually too emotional. If punishment is called for, the rider must be very careful to keep it under control, and always present the horse with an alternative. A powerful intent, especially an unwavering intent is a very good tool for the trainer, however in all fairness it must be pointed out that some horses also have such an intent, it is up to the trainer and handler from a very early stage to cultivate this so it stays as an affirmative intent to man. If it developes out of meaness or indulgence , negatively, there will be few riders who will be able to match such an animal.

CHAPTER SIX

JUMPING CROSS COUNTRY AND STEEPLECHASE
" FITNESS, RIDER POSITION, AND SOME PROBLEMS "

Cross country jumping is an exciting realm of the jumping horse's training. It is challenging and when done correctly it is testing for the horse and the rider. Any tendency for cross country designs to be at war with the horse, instead of optimisticly testing should be arrested. They must never be designed to try to stop the horse, they are to test a horse at a level compatible with the horse's training and fitness.

In my opinion the greatest difference between the stadium type jumping or high jumping and cross country are three. One, the terrain, the stadium having always level footing on approaches to jumps, in fact with the exception of an occasional bank the stadium fences are always on a level plane. Cross country fences may occur virtually anywhere in the contours of natural terrain. Two, the distances covered in the stadium type jumping is over a relatively short

coursein a specialized and rather artificial motif. The cross country course may ramble over miles optimumly taking in account the challenges of various kinds of environments. Third, the physical make up of the jumps. The stadium type obstacles are infintely kinder in the case of mistakes, as they are moveable and not fixed in any way in their construction. Cross country fences are the opposite. They should be imposing and very sturdy without traps but without any give. When riding cross country certain goals or ideas should be kept in mind. The jumps should be arranged or used to build and test certain qualities or phases of the jump, in the horse and rider. Cross country work should build and test the endurance in the horse. Ideally the horse should come in contact with as many different types of terrain as possible. A fair course of jumps will include some riding throught woods, some in close quarters, to test the sensibility of the horse. It should include open pasture or meadow land of differing contours, where the horse can gallop freely, but on a natural surface, not a doctored flat track. It should include crossing streams and water including as many types of footing as possible. A course laid out entirely free of rocks in open flat meadows or on bridle paths is not realistic and does not make the rider look out for himself and the horse. Courses should represent fairly the difficulty of travelling

in a particular area, on horseback among man's myriad of restraining, containing, and mechanical obstacles as well as natural obstacles. The training of the balanced jumper must include work in these places so the hor e will be at ease in itself and not rely on familar surrondings for it s security, Endurance is a qaulity which is enhanced by breeding, however proper athletic work can develope the endurance of any horse. At first we should work over fairly short distances perhaps two or three miles, alternating over work between the three gaits, until the horse can gradually run a longer and longer part of the distance without becoming quickly fatigued. Training in terms of fitness is a science, and systems of training may be very complex or they may be simple, however in general it is the rapid work which build the heart and lungs, the slower work which build muscle, although that is rather simplistic, it is the balance between them that dtermines how the horse will endure. Cross country work should challenge and develope the horse to accept visual bombardments. The horse must learn to accept strangeness in encounters under saddle, and proceed in spite of them. I have often seen riders go out of their way to show their horse something strange. This can develope into a bad habit, for the horse will feel it should have the chance to smell bite, or taste every obstacle that is strange. It is better to trot past prearranged oddities closer and closer if the horse is wary

but never stop to let the horse indulge in his curiousity or fear. If we develope a habit of allowing the horse, to stop and investigate they will look for any strangeness as an excuse to stop and play. This oftens leads to shying Under saddle the horse must learn to realize the distiction. It is not a time to snort run and play as in the pasture. When we develope a fearless foward movement we develope boldness that will be transmitted to our work over fences. Such horses are much less inclined to be recalcitrant over new and different fences. Cross country work should build and test the horse's handiness or handle-ability. Hard turns equally testing right and left are not out of order.All speeds should appear on a good course. A fair course will allow smaller hander horses to make up some time lost to bigger horses on the flat long stretches, in turns. Good turns are important in testing the large horse, for such horses must be able to carry their weight gracefully and safely. Grace and fluidity should be a goal in the overall test.

The cross country course must obviously test the jumping ability of the horse. Here the horse must be presented with many varied obstacles. Banks, ditches, drops, water, and so on. The cross country obstacles should be constructed of different natural materials and present varied situations. It should have a variety of approaches as well as test the horse's ability to handle close multiple problem obstacles.

Finally the cross country course must test the horse's speed. The horse is first and foremost a natural runner. The rider must be able to be comfortable with speed, they must realize that strong speed eliminates certain absolute controls. It is like a hawk gliding in a strong wind. The hawks could not stop themselves at any given moment, rather they have relative control in the wind, so they guide themselves allied with the wind. So it is with the rider on the galloping horse. There is relative control. The rider must ally himself with the horse, and not hope or demand impossible controls during great movement. If the rider keeps his vision focused outward ahead of the horse his or her eyes will not become blurred with the after images of an overly stimulated eye. They will be able to keep a clear picture in relationship to the speed.

To train the horse over cross country fences the horse must be in above average condition and must stay in above average condition. We call this fitness , when referring to the horse. Obviously there is the intial prerequisite of age and physical developement.

To get the horse in condition we usually use a graduated increase in work load concurrent with a graduated increase in diet. We exercise to turn the food into muscle, and to feed the working body, always in a positive energy situation, that is

that we feed more than the horse is using up,better feed more energy than the horse is using up. Nothing governs the pace in training like condition, and nothing governs condition like food. In keeping the horse fit, the trainer must be acutely aware of the constant battle with maladies in the highly tuned horse. Disease in general is a constant cloud over training, how it is handled determines the quality of trainers. Too, too, many horses are used up in the mad pursuit of glory. Good training must raise the horse completely including lengthening his life, and certainly not limiting it. There is no sane achievement in accumulating trophies at the cost of horses. Jumping is a tough sport and can be cruel if it is not kept on the highest order. The trainer and rider must have a working knowledge of the psychology and pathology of the horse.

The rider must be aware that fitness is just that. Once the athletic horse builds a level of energy up, the rider must prepare to limit it, yet must let the horse exercise to that fitness. The horse cannot be exercised one hour a day, and be confined to a box stall for twenty three, even though this is often a common practice, it is not healthy for the mentality of the horse. For the fitness can then be turned into nervous energy that can be exhibited in bad habits and unruly dispositions. In modern horses of tremendous sporting

blood this is an important responsibiltiy. These are large strong animals with an often high inherent energy level.

In riding cross country over rough terrain, the rider often adapts the standard jumping seat. On the longer rides cross country the rider may bear more weight in the feet and on the stirrups, but it is still important to carry much of the weight in the knees and through the thighs, so that they can absorb alot of the shock. This does not mean that the rider should lean way out over the withers , this will only place an added burden on the horse's shoulders which will eventually show up in soreness, or lameness. There seems to be a preoccupation with adjectives in front of balance, in much of riding theory. What must be remembered is that balance is equipoise, by definition it is fleeting and dynamic and by definition it is a continuous adjusting process between influences, weight, and force. A seat will be useless if it negates use of the leg, it will be useless if it impedes balance, or overburdens any particular part of anatomy of the horse.

The jump has an interruptive quality. As the horse shifts in the approach culminating in the dropped haunches at the take off, so the rider must adjust his balance. If the rider stays over the neck of the horse at that time, he will be out of balance, and will becoming a negative force in the dual system of balancing between horse and rider. How can so

many riders get away with an obvious imbalnce either over the forehand or over the loins? The answer is in the great strength of the horse, who can lift and jump with the powerful hindquarters. The choice will be up to the rider to develope a style or attitude based on uninformed principles and harsh bits, where the horse jumps in spite of the rider, or to aim at the more difficult simple true balance which can benifit any horse.

As the horse approaches the fence the same interruption of gait begins to occur as the weight transfer insues. Imbalance in the rider especially if overly foward can encourage rushing in the horse, and always discourages finesse in the hands and legs. If in galloping between cross country fences the rider has limited use of the hands and legs in any way than he is in a false balnce.

The training of the horse over cross country fences can begin as soon as the horse becomes familiarand at least comfortable with the stadium type obstacles. However this early cross country work should be limited to simple fences with very fair approaches. As the horse becomes sufficiently developed we can make better use of the cross country jumps and what they were designed for.

As we have said the paramount difference between the stadium jumps and cross country is the footing. It is also the use of footing and the contours of land that seperates cross

country courses. Given some relative similar styles of fences, it is the positioning in regards to footing (which includes contours) that makes for designs that test and designs that donot test or even designs that destroy. Again the second great difference is the immobility of the obstacles. Good cross country fences will be constructed so strongly that they cannot be knocked down. When this element is coupled with a considerable drop on the landing side of a fence for example, an unbalancing tick can be disasterous. Thus these fences command more respect than do the show jumping rails. There are of course other differences, the speed, the distance and so on. Finally there are the jumps themselves.

By there definiton and purpose cross country jumps are always increasing in originality, however they must have a purpose to test a certain type of approach or to accent a certain landing, they should have a dominat problem, either of lie, or visual effect, or landing, or approach, etc. They should have a purpose and not merely be baracades along the way. It is for this reason that percentages are used in preparing a certain number of drops, a certain number of water jumps and so on. The course should balance out, equal turns to right and left, equal amounts of descents and ridges fair proportions of fences on the flat, water, and drops. Therefore when setting out to build such jumps it pays to first think of what types and numbers one will need and then go out to the sight to locate them,otherwise

the course will usually have trouble with symmetry, and miss required types of fences in the correct proportions. Course builders have to pay particular attention to the number of drop fences since these are usually dramatic to build, however are strenuous for the horse. It would be impossible to describe the many many types of cross country jumps, however they do lend themselves to some classification in their approaches, landings, and footings.

Uphill Grades and Fences;

Fences constructed on an uphill grade present the added problem of failing inertia as well as the standard struggle with gravity over the jump. They of course call for an added burst of energy, however the rider must be careful not to push or let the horse spend himself on the grade approaching the fence, leaving the horse winded and weak for the jump. In this regard, it should be realized that anytime the muscle becomes overly tired and weak, the shock of movement must be taken up by the tendons and ligaments. This is the time when sprains and damage occur. The rider must have a close contact with the condition of the horse at any given time, and for no reason should push a sporting or game horse on when it is not running on it's muscle, as this is courting disaster and taking advantage of a good heart. App-

roaching the uphill grade an even pace should be maintained, and the energy saved for the jump, where it's need is critical. Sometimes riders will let their horses all out up a hill these wind sprints are quite demanding and can tire the horse very quickly. Iam sure the practice comes from the psychological security these riders feel going uphill, normally these same riders would never let their horses out that much going downhill. When done uncontrolled these wind sprints are a wasteful practice. When done controlled they can be effective in building heart and lungs, but when used in this way they are never used with a jump. It should be remembered that these exercises have an exaggerated effect of the legs. It is wiser to ease the horse up grades for an overall rhythm always saving the horse's best attention for the obstacle. There is another slight matter on jumps on an uphill grade, and it is a matter of perspective. Such jumps often seem to loom up to the sky, and may look overly large,the rider as in the case of all cross country jumps must know well ahead of time, the technical problems of the jump clearly, concerning height, spread, angle, ponit of take off,etc. When a rider walks a cross country course he or she should walk it at least twice, once very carefully noting peculiarities of jumps best places of entry , rocks, etc. the second time the rider should walk the course without

distraction and fast, there is a great difference when approaching the same fences at a gallop, than on foot carefully inspecting every square foot, if the rider walks the course fast and over the same lines he intends to take with the horse it can help to limit any confusion in the actual ride.

Downhill Grades;

Fences constructed on a downhill grade can be difficult. If the rider and horse hold back too much they risk the possibility of meeting the fencewith inadaquate impulsion and the horse may have trouble clearing the entire obstacle, or the horse may stop altogether. If the horse and rider approach too fast they may slip under or get in too close to the fence, especially if the footing is at all tricky. In this case it is very difficult for the horse to jump out of the hole so to speak, or have enough time to fold the legs properly. In any case the trajectory would be so steep that if the fence had any depth at all there would be a real question if the horse could clear the fence,

The horse must learn to take off boldly from a descending bank or grade. The trainer can help the horse learn to be fairly bold on downhill grades by training over small spread fences on the descent until the horse can handle these with consistency. The rider then can move to different types

of obstacles on the downhill grade. There is a precaution where the descent or slope continues on landing. That is of the increased strain on the landing foreleg in such a great leap with an increased drop. Even with this added dimension the rider cannot approach too cauticusly or weakly or they risk a bobble or unbalancing tick on an already difficult landing. They must jump boldly in good balance without over anticipating the landing. If the horse is in the proper condition for this type of fence, then the rider should help bring the horse to the fence in the best possible balance as this will be the safest way to accomadate a strenuous landing. The rider must not anticipate the landing and fail in the jump. If the horse strikes the top of such a fence with it's hind legs, it is almost always because of a tenative approach on the part of the rider, or because he has leaned backward in the air. It is a common mistake , the back of the horse is hollowed out, that is is sagging either from too strong a hand or an unbalancing seat over the fence. The horse cannot follow through properly and may hang it's hind legs. If we interrupt the spine anywhere, again the results will be the same, dragging legs. If the rider is too tenative, or leans back on the horse, this lack of follow through is a real and consiatnt threat, which can eventually lead to stifle, cannon, or coronet injuries.

When the downhill grade is used in conjunction with, for example an uphill grade on the landing side of a ditch we have a "coffin type" jump. If used in combinations we have a sunken road obstacle. These jumps call for the same boldness of take off and nice free stride full of impulsion. A rhythm, that cadence , must be maintained. Any over aid, or shift in weight can disturb the horse into some short steps, in an effort to get in closer to the fence for the take off. This is not good. In the cases of uneven jumps it is better to jump in rhythm, even if the striding leaves the distance a little long or short. Otherwise the rhythm is disturbed, the impulsion breaks down, and even though the horse may be closer to the jump, it has become more difficult with a steeper trajectory, especially in the case of any fence having depth to it.

The idea of planning the exact striding cross country is not viable, but the idea of maintaining rhythm is essential as well as placing the horse in the best possible spot along the face of the fence. For instance, an experienced rider and horse approaching their favorite kind of fence, for the argument a bullfinch, or brush fence, may range a little lengthening in stride fully confident that they can jump clean almost regardless of the exact final stride. The same team approaching a stark white vertical might collect the canter, still shortening the stride in the approach in order to be more exact for the take off. In both examples rhythm

is maintained . The point is the rider should continue cadences and not change rhythms abruptly shortly before fences. A good series of fences will have a tempo to them, alternating stretched out galloping , long stretches and jumps, and short staccato pieces through turns and some fences and combinations. It is the feeling for the series that the rider should strive for. When the horse and rider find the tempo of a given course and maintain a straight fowardness throughout the series it is really symphonic. The cross country should see to a similar degree the same longitudinal and lateral flexions, collections and extension that we see in dressage. Even though fences come one at a time what is done between them can help in their negotiation.

Lateral Grades;

There are also take offs on a slope. Jumps positioned sideways on the slope, where the horse takes off from an angle. One such fence is called the "Helsinki" , where the fence a vertical of three or four sections follows the contours of the slope. There can be a greater strain on the lower hind leg during the take off over these fences, on uneven ground. To avoid this, the horse may be jumped at a slight angle into the hill and thus minimize the strain, as well as

the possibility of a run out downhill. Later a straight foward approach will be fine for the horse will learn to adjust for these fences.

Water Jumps;

In a class all by themselves are the water jumps. There are two distinct kinds of water jumps. One is the broad jump. It is usually restricted to the stadium where the horse is expected to clear the entire length without touching any part of it. The second is the splash type. Here the horse is tested for boldness by being asked to dive right into the water of ponds, streams, and so on. In accustoming the horse to training in water the rider will often ride the horse through creeks, and small bodies of water, it is fine to stand in our pass through many of them. The novice rider should be warned that if the horse begins to paw at the water strongly it is a signal that the horse intends to roll or lie down, and some horses will do it if the rider does not move them on abruptly. This is mentioned really only for the novice who may be intrigued by the novel behavior only to find him or herself in the stream tack and all.

Cross country splash jumps should be large enough bodies of water so that the horse will not confuse them with broad jumps of the stadium. As long as the rider keeps this

distinction in mind he should avoid having any trouble with broad jumps over water. Of course splash water jumps should be of limited depth usually no deeper than eighteen inches, otherwise the shock or braking effect of the deep water will almost certainly cause the horse to stumble and the rider may fall. The texture of the footing beneath the water is also important, as soft clay etc. can be so boggy as to strain the horse in an effort to get out. The rider must be careful to know very well the water conditions before they jump into any water jump.

In teaching the horse to jump broad water jumps, a useful aid will be to place a low pole or stadium rail over the middle of the water, or else a small fence before the water. As the horse gets accustomed to the leap up as well as out, when the horse becomes familiar with the sight of the water and the flatter trajectory , the pole can be dispensed with and the horse will be jumping true broad water jumps. These jumps are usually met on an extended stride, where the momentum can sometimes help the horse to fly the obstacles. Ideally there must be some arc over the jump, only with an arc will the horse be bending properly allowing the hind legs to follow through without interruption in the back, thus limiting the chance of a dragging foot in the water.

The last type of obstacles we will be concerned with are ditches and their opposites banks. Ditch jumps are merely broad jumps which we have already covered. They may present psychological trials but they are strict broad jumps, unless the horse is supposed to jump down intp them inwhich case they are simply drops and or banks.

When jumping up banks the horse probably uses his front legs more than in any other jump, as they often will pull with these legs in climbing strides up unto the bank. This jump is also unique in that it has relatively no landing. The horse leaps up onto the bank with crouched legs, and even on landing the hind legs stay crouched. The rider should be prepared for a strong take off and a rather short or abrupt landing, staying of the hind end to facilitate free action of the somewhat cramped legs. Jumps down banks are simple descents where the rider should take care not to lean overly foward in case of mis-steps, as any imbalance is costly in these jumps. In the same vein the rider should not be overly relaxed in the approach to descending banks. Treat them as regular jumps otherwise there is a tendency to be left behind only to land sharply on the horse's loins.

Lastly if the footing is slick with mud or water the rider should realize the necessary caution in approaches, and weigh the possibilty of proper shoeing, for better traction. If it is so slippery that the footing is risky jumping should be postponed.

From everything we have said in this theory on jumping. It can be said that in general the horse is best prepared by a training program that concentrates on one; the four basic types of jumps, the spread, the vertical, the oxer, the broad jump, including water. Two, the dressage that must be encountered in between the fences. More specificlly the extension and collection of the stride, the impulsion and balnce especially in turns, and the developing suppleness necessary to execute and connect all these pieces. Without responsive suppleness there can be no connection. We strive for the supple jumper, pliantly going forward, at either a fast or slow pace, through turns and on the straight.

Jumping and the theory behind it in the end is flowing it is not a matter of cracking the nut for the kernel. In it's amorphous nature some will find frustration others joy.

CHAPTER SEVEN

TEACHING JUMPING

It seems to me that the job of instruction is a job of interpreter, trying to understand the language of the horse and of the rider, and relaying information back and forth. All the while educating each to the other s actions, sounds, and feelings. It is of course difficult and needs imagination concentration,patience,practice and above all respect for both animals.

It is not the job of instructor to engrain disciplines and specific rules, time takes it s toll on hard and fast rules, and changes have a way of making room for themselves. The students who learn to exsist with a set of rules are made nervous by changes and are hard pressed to find a comfortable harmony in their own style. A confident truth surfaces when students are free to question and try all theories.

The instructor must cultivate a true objective, knowledgeable sight, for it follows that for students who learn

such sight there is a secure and definite termination of instruction, not learning but instruction. To be sure it is hard to leave a teacher who has become a friend, but there is a need for the pupil to choose their own path. The flattery and power of instructing, commanding, and teaching others must be maturely and strongly dealt with. There is no room for egocentricity in the quest for knowledge. Yet it is an easy trap for the instructor to become the center in a quest that really belongs to the horse and the rider.

Good instruction must beleive in the real worth of every horse and rider, whether their goals are international competition or serious backyard riding. Instructors must become living receptors able to communicate freely with horses and people alike. They must teach themselves to be fair. The rewards in riding, in the end are more than technical skills Aquired skills are merely tools to look farther, skills are fleeting but the mentality the personal rewards of patience control and the thrill of coexsistance and communication with another species are the great rewards, and unfortunately they have little to do with ribbons or silver.

In teaching jumping there are some problems that are unique to this phase of equitation, foremost is the element of risk. Students oblivious to the risk, must be made aware of it, and learn to respect it. Students intimidated by the risk

must become more relaxed through confidence. There is no wat to teach jumping except on the horse , following more or less the same program the young horse has taken, beginning with the cavelletti. Perhaps the greatest advantage the learning student will have is a well trained horse who knows what is expected of him and can do his job inspite of the learning mistakes of the green rider. Later on the rider will need to ride different and difficult horses in order to round out their style, however in the beginning good school horses are priceless teachers.

Instructors must realize the fragile nature of confidence. If it is marred too often and too early with failures, even determined riders will weaken. In timid riders confidence must be cultivated and encouraged. Yet the rider must be constantly tested within fair bounds. Green jumping students place a great deal of trust in their instructors, when such trust is surrendered the instructor must accept it with full concentration. If he or she cannot give tye rider full attention they should not instruct at that time.

Once the beginning rider succeeds and begins to progress, the progression should be as rapid as possible. Nothing is gained by becoming hesistant if the student has the ability. Perhaps more so in jumping than anywhere else, the instructor should command some authority, so that the instructor's mere

presence can have an analgesic effect without interrupting every stride of the ride. Students must have room to make mistakes, it is part of learning. The tact of the instructor will help place the mistakes where they will do the least harm, yet be dramatic enough as to be remembered by the student. It has often been said that good riders donot necessarily make good instructors, and vice versa. This can be true, however I am of the opinion that they must go hand in hand, at least good instructors must be good riders.

As far as instructing in the jump, where the entire leap from three strides out to the landing may only take a few seconds a good example is not enough. The instructor must have some predilection for words. When the student is not carefully prepared to be able to view a jumping performance in totality, they pick up idioms and learn a bias to a certain part of the jumping dance. It is when we arrive at a place of knowledge where we can view a performance fairly looking past dramatics and personalities with a critical yet fair eye, that we are getting somewhere. It is so easy in view of the effort it is to learn about riding, to be engrossed in trivialities of position or foolish loyalties, and bias. I feel it is the instructors job to stay away

from the many idioms in the riding language, there are plainly enough intangibles to deal with, without adding a bunch of clique expressions that serve more as social indicators than descriptions. We must look to see more and not to bolster or cement what we already know. It is most difficult but rewarding when we can stop time to match our reflexes within fractions of seconds, and be able to really know what is taking place in a course of jumps. It is a wonderful experience when we can ride a course of jumps with a rider from the ground. For then we are limited only by the number of horses around for learning experiences. It is in this view that any learner will not pass up opportunities to watch practically any horse event.

There is no doubt that in instruction we have ideas, and wish our students could ride like some great masters. But it is of no service to stress a model for any student for they may equally choose a bad model. It is better to allow some room to roam, for if the student has quality, a elegance will prevail. For a long time we are pieces of our teachers, and our models, pieces of information and lessons. It is up to the instructor to let the pieces fuse together responsibly so that one day a new form appears. One day as the colt seems to become the stallion, the student becomes the rider., equipped with their own language. For instructors, this is a funny time because he or

she must relinquish control. If in his heart the student has learned respect and is happy than they are pleasant. However if in their heart the student is mean or violent, the result seems to have been a waste of time. But it is not the instructors job to judge. He must run the apprenticeship, but one day it is out of his hands. The horse can protect himself from violence with his own violence, his powerful will, or persistant submissiveness, that can wear out all fury into humiliation for the rider.

Of course the instructor must be good friends to the school horses, they should know him well and respond to him if the rider is in trouble. The instructor should soothe them and assure them when they are asked for something all wrong by the student. He should above all never underestimate their gentilesse, or spirit and should acknowledge it for good habit, especially in the presence of students.

In jumping there often seems the need for early students to measure themselves. It has to be brought out that measurements of jumps has no correlation to the measurment of growth in the rider. How far , high, or wide we jump is not an accurate yardstick. Not everything is measured in meters or yards. Harmony and grace for example cannot be weighed.

Teaching is challenging and it cannot be seperated from learning. The teacher must always be foremost a learner.

Lastly and not accidently, I leave with what I have found to be so far the most troublesome aspect of teaching. It is to instill or promote humility in the sport and learning. So many riders hurry madly expecting expertise in a few short years. Impatient people whirl on demanding knowledge and skill. Where this arrogance comes from should be looked into. In any case once a person decides to enter the world of riding the horse it should be stopped.

To me it seems the worst overall problem that faces instructors and horses in the modern world, is the insulting lack of respect for the graciousness of the horse. This will miss all communication between horses and rider, and instead will value the incredibly immature domination of life around us. In the end this will be the real task left to the instructor not necessarily to preserve the great baroque riding style not to promote a new one either, in the end as it has always been, it will not be a question of style, it is a question of spirit.

EPILOGUE

Riding is no less than one of the greatest and longest experiments in intraspecies communication, and the gifts that the horse has given to man are plantiful, generous, and obvious. But, for our work with the horse to have any justification at all, the horse must also benifit from man, or else all the talk of balance in training and altruism is just that, talk. In the end if the horse cannot benefit from his association with man than in spite of all the grand apologies and good intentions, the horse is only a captive, a teacher in prison. Thus any idea of equipoise is just another quick sale for man, and the idea of freedom or lightness in riding would be a travesty. This must be every trainer's first and over riding decision. No one thing can incessantly or unconciously dominate another, and have any real communication. Not in a world where everything is connected and so much is still unknown. In view of all the different kinds of horses it has been said that the real quality of a horse can be seen in his eyes. So it is with riders . In some,their is the reflection of other men, their wants, and needs, their is is a mirror. Sometimes, though, there is a rider and his eye doesnot reflect the demands of others but glows with the image of the horse.